

## South Carolina Academic/Career Development Integration Activity

**Title**                **Scientific Investigation Reflection (ES-4)**  
**Subject**           **Science**

**Grade Level 5**

**SC Content Standard** – Scientific Inquiry – Grade 5. Standard 5-1. The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

5-1.3. Plan and conduct controlled scientific investigations, manipulating one variable at a time.

### **National Career Development Guidelines Goal/Indicator**

Career Management GOAL CM4. Master academic, occupational, and general employability skills in order to obtain, create, maintain, and/or advance your employment.

Indicator CM4.K3. Recognize that a variety of general employability skills and personal qualities (e.g., critical thinking; problem solving; resource, information, and technology management; interpersonal skills; honesty; and dependability) are important to success in school and employment.

### **Career Development Objectives**

1. The student will plan and conduct a controlled scientific investigation, manipulating one variable at a time.
2. The student will recognize employability skills used in the scientific investigation.

### **Assessment**

1. The student will plan and conduct a controlled scientific investigation, manipulating one variable at a time (observation). The student will document the results of the investigation (completion of teacher's standard lab report form).
2. The student will complete the *Think About It! Reflection Worksheet*.

### **Preparation**

- Prior Learning—Instruction in planning and conducting a controlled scientific investigation
- Handouts/Worksheets—*Think About It! Reflection Worksheet*, *Skills for a Lifetime* handout, and teacher's standard lab report form
- Resources/Materials—textbook, tools and instruments for conducting the investigation
- Time Required—60-120 minutes for instruction and lab work plus wrap-up discussion

\* Adapted from *Career Development Tool Kit Grades 6-8*, Linda Kobylarz & Associates, 2000. Used with permission.

### **Procedures**

#### **Part One (60-120 minutes)**

- In this activity, students will plan and conduct a controlled scientific investigation, manipulating one variable at a time. The student will recognize the employability skills used in the scientific investigation.
- Begin by reviewing the procedures for planning and conducting a controlled scientific investigation in which one variable at a time is manipulated.
- Describe the lab investigation. Have students identify questions and generate a hypothesis.
- Give students time to complete the experiment, collect, and record the data.
- Discuss students' findings and what they learned.

### **Part Two—Career Development Connections**

- Give students a copy of the *Skills for a Lifetime* handout. Discuss the employability skills. What skills did students use to complete the investigation?
- Have students complete the *Think About It! Reflection Worksheet*. Discuss their responses and what they learned.
- Point out to students that the *Skills for a Lifetime* are important in our personal lives, in school, and at work. Encourage students to work on developing those skills.

### **Crosswalks**

#### **SC Career Guidance Standard/Competency**

Learning to Work Standard 4. Students will demonstrate a positive attitude toward work and the ability to work together.

Competency 4.1. Recognize the personal qualities of responsibility, dependability, punctuality, and integrity in the work place.

#### **Key Employability Skills**

Personal Qualities—Responsibility, self-management

Thinking Skills—Problem-solving, decision-making

Information Management—Acquires, interprets, and communicates information